ABSTRACT

Methods and apparatus for switching Fibre Channel Arbitrated Loop Systems is provided between a plurality of Fibre Channel Loop devices. In one aspect of the invention, the system switches based at least in part on arbitrated loop primitives. An exemplary interconnect system may include a first port and a second port, both including port logic to monitor certain arbitrated loop primitives, a connectivity apparatus, a route determination apparatus including a routing table consisting of ALPA addresses and their associated ports, the route determination apparatus coupled to each port and the connectivity apparatus, where the connectivity apparatus creates paths between the ports based on arbitrated loop primitives. In one embodiment, the connectivity apparatus is a crossbar switch. Examples of the arbitrated loop primitives that cause the switch to create paths between ports includes one or more of the following: ARB, OPN and CLS. In yet other aspects, the system ensures device access fairness through one or more techniques, including a rotating priority system, a counter to count the number of OPNs, especially sequential OPNs, and/or priority based on port type. Device zoning may be implemented. In one implementation, the system includes trunking such that frames may be transferred on multiple ports.